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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,259	10/01/2001	Richard C. Rose	2000-0572	5143

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EXAMINER	
WOZNIAK, JAMES S	

ART UNIT	PAPER NUMBER
2626	

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/966,259	ROSE ET AL.	
	Examiner	Art Unit	
	James S. Wozniak	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In response to the office action from 4/4/2006, the applicant has submitted a request for continued examination, filed 7/5/2006, amending claims 1, 13, and 21, while arguing to traverse the art rejection based on the amended limitations *(Amendment, Page 9)*. The applicant's arguments have been fully considered but are moot with respect to the new grounds of rejection in view of Komori et al *(U.S. Patent: 7,050,974)* in view of Gong *(U.S. Patent: 6,151,573)*.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-4, 8-9, 15, 18-19, 13, 21-23, and 27-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al *(U.S. Patent: 7,050,974)* in view of Gong *(U.S. Patent: 6,151,573)*.

With respect to **Claims 1, 13, and 21**, Komori recites:

A memory that stores data related to at least one of a communication device, transducer, vocal information, and acoustic environmental data *(model holding unit, Col. 2, Lines 25-34; Col. 3, Lines 24-30; and adaptation data types, Col. 5, Lines 3-35)*;

A controller coupled with the memory that determines the data of the at least one communications device, transducer, vocal information, and acoustic environmental data and then compensates at least one speech recognition model to reflect the data *(speech recognition model adaptation unit, Col. 3, Lines 24-30; and Col. 5, Lines 3-35)*;

A communication device that receives speech utterances over a network *(network communication means, Col. 2, Lines 10-14; Fig. 1, Element 300; and Abstract)*; and

A speech recognizer that recognizes the speech utterances by using the at least one compensated speech recognition model *(speech recognition unit, Fig. 1, Element 203; and speech recognition performed using adapted models, Col. 4, Lines 61-66)*.

Although Komori utilizes environment data in speech recognition model adaptation *(Col. 3, Lines 24-30)*, Komori does not specifically suggest a means for determining an acoustic environment probability, however Gong recites a means for calculating environment probability in speech recognition model adaptation *(Col. 4, Lines 50-60)*.

Komori and Gong are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori with the means for calculating environment probability as taught by Gong in order to implement optimal environment model clustering in a speech recognition database *(Gong, Col. 1, Lines 54-60)*.

With respect to **Claims 2 and 22**, Komori further recites:

The transducer data includes a distortion value related to a transducer of a mobile communications device *(portable telephone, Col. 1, Lines 17-24; Col. 2, Lines 15-24; and microphone distortion, Col. 5, Lines 13-24)*.

With respect to **Claims 3 and 23**, Komori further recites:

The acoustic environmental data includes a background noise value that corresponds to an operating environment of a mobile communications device (*portable telephone, Col. 1, Lines 17-24; Col. 2, Lines 15-24; and noise distortion, Col. 3, Lines 24-30; Col. 5, Lines 3-12)*.

With respect to **Claim 4**, Komori further recites:

The vocal information includes a distortion value related to an end user associated with a mobile communications device *(portable telephone, Col. 1, Lines 17-24; Col. 2, Lines 15-24; and speaker adaptation, Col. 5, Lines 25-34)*.

With respect to **Claims 8 and 27**, Komori teaches speech recognition performed at a network server *(Fig. 1, Element 200)*, while Gong recites the use of HMM speech models *(Col. 2, Lines 29-52)*.

With respect to **Claims 9 and 28**, Komori teaches speech recognition performed at a network server system *(Fig. 1, Element 200)* having environment, speaker pronunciation, and microphone adaptation elements, and feature a storing means in communication with a speech recognizer *(Col. 3, Lines 24-30; Col. 5, Lines 3-35; and Fig. 1)*.

With respect to **Claims 15 and 29**, Komori recites:

The acoustic environmental data is determined using at least one microphone in an end user's environment *(microphone for speech input, Fig. 1, Element 101; and Col. 5, Lines 13-24)*.

With respect to **Claim 18**, Komori discloses:

The vocal information represents a variability that exists in vocal tract shapes among speakers of a group *(speaker-specific adaptation data that would differentiate a particular speaker's voice from other speech recognition network users, Col. 5, Lines 25-34)*.

With respect to **Claim 19**, Komori discloses:

The controller communicates with a memory that stores various acoustic environmental models and various features of a specific type of mobile device *(portable telephone, Col. 1, Lines 17-24; Col. 2, Lines 15-24; and model holding unit, Col. 2, Lines 25-34; Col. 3, Lines 24-30; and adaptation data types, Col. 5, Lines 3-35)*.

4. **Claims 5, 6, and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al in view of Gong and yet further in view of Kanevsky et al *(U.S. Patent: 6,442,519)*.

With respect to **Claim 5**, Komori in view of Gong teaches the speech recognition model adaptation system utilizing microphone, speaker, and environmental noise data, as applied to Claim 1. Komori in view of Gong does not teach that the aforementioned data is provided by a personal computer, however Kanevsky teaches a personal computer used to receive speech data *(Col. 4, Lines 18-46)*.

Komori, Gong, and Kanevsky are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Gong with the use of a personal computer for receiving speech data as taught by Kanevsky in order to expand the amount of speech data available for improved speech recognition by utilizing

a personal computer connected to a network to receive speaker data *(Kanevsky, Col. 3, Lines 10-35)*.

With respect to **Claims 6 and 25**, Kanevsky further teaches a PDA for receiving speech data *(Col. 4, Lines 18-46)*.

5. **Claims 7 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al in view of Gong and yet further in view of Hunt et al *(U.S. Patent: 6,094,476)*.

With respect to **Claims 7 and 26**, Komori in view of Gong teaches the speech recognition model adaptation system utilizing microphone, speaker, and environmental noise data, as applied to Claims 1 and 21. Komori in view of Gong does not teach that the aforementioned data is provided through a satellite communications system, however Hunt teaches such a satellite communications system *(Col. 4, Lines 16-23)*.

Komori, Gong, and Hunt are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Gong with the use of a satellite communications system as taught by Hunt in order to provide a practical variation of a cellular phone network that allows a user to access voice mail through recognized speech commands *(Hunt, Col. 4, Lines 16-33)*.

6. **Claim 10, 17, and 30-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al in view of Gong and further in view of Heck et al *(U.S. Patent: 5,950,157)*.

With respect to **Claim 10**, Komori in view of Gong teaches the speech recognition model adaptation server system utilizing microphone, speaker, and environmental noise data, as applied to Claim 8. Komori in view of Gong does not specifically teach a means of updating a speaker model to reflect a specific type of communications device, however Heck teaches such an updating means *(Col. 9, Line 30- Col. 10, Line 48)*.

Komori, Gong, and Heck are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Gong with the speaker recognition model adaptation means taught by Heck in order to implement a robust speaker recognition system that can function in the presence of handset mismatches *(Heck, Col. 2, Lines 5-9)*.

With respect to **Claims 17 and 30**, Komori in view of Gong teaches the speech recognition model adaptation system utilizing microphone, speaker, and environmental noise data, as applied to Claim 13. Komori in view of Gong does not specifically suggest that the microphone (transducer) data is a distortion value based on a difference between an actual transducer and a response characteristic of a training transducer, however Heck teaches such a distortion value that relates to transducer data *(Col. 10, Lines 9-48)*.

Komori, Gong, and Heck are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Gong with the transducer distortion scores taught by Heck in order to implement a robust

speaker recognition system that can function in the presence of handset mismatches *(Heck, Col. 2, Lines 5-9)*.

With respect to **Claim 31**, Komori in view of Gong teaches the speech recognition model adaptation system utilizing microphone, speaker, and environmental noise data, as applied to Claim 21. Komori in view of Gong does not specifically teach a means of updating a speaker model to reflect a specific type of communications device, however Heck teaches such an updating means *(Col. 9, Line 30- Col. 10, Line 48)*.

Komori, Gong, and Heck are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Gong with the speaker recognition model adaptation means taught by Heck in order to implement a robust speaker recognition system that can function in the presence of handset mismatches *(Heck, Col. 2, Lines 5-9)*.

7. **Claims 11-12, 20, and 32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al in view of Gong and further in view of in view of Cilurzo et al *(U.S. Patent: 6,434,526)*.

With respect to **Claim 11**, Komori in view of Gong teaches the speech recognition model adaptation server system utilizing microphone, speaker, and environmental noise data, as applied to Claims 1 and 21. Komori in view of Gong does not teach personal user account information that includes administrative information, however Cilurzo teaches such account information *(Col. 5, Lines 27-64)*.

Komori, Gong, and Cilurzo are analogous art because they are from a similar field of endeavor in speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Gong with the user account information taught by Cilurzo in order to provide multiple users with access to a network speech recognizer having a capacity that can be expanded dynamically *(Cilurzo, Col. 2, Lines 22-51)*.

With respect to **Claims 12 and 32**, Komori in view of Gong teaches the speech recognition model adaptation system utilizing microphone, speaker, and environmental noise data, as applied to Claims 1 and 21. Komori in view of Gong does not teach the ability to select a specific speech recognition network, however Cilurzo teaches such a selection ability *(Col. 5, Lines 4-26)*.

Komori, Gong, and Cilurzo are analogous art because they are from a similar field of endeavor in speech recognition. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Gong with the ability to select a specific speech recognition network as taught by Cilurzo in order to provide multiple users with access to a speech recognizer having a capacity that can be expanded dynamically *(Cilurzo, Col. 2, Lines 22-51)*.

With respect to **Claim 20**, Cilurzo teaches the user account information as applied to claim 11.

8. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Komori in view of Gong and further in view of Ranzino *(U.S. Patent: 6,281,811)*.

With respect to **Claim 14**, Komori in view of Gong teaches the speech recognition model adaptation system utilizing microphone, speaker, and environmental noise data, as applied to Claim 13. Komori in view of Gong does not teach the identification of a user device according to an RF ID tag, however Ranzino teaches such a means for user device identification *(RF ID, Col. 4, Lines 31-42)*.

Komori, Gong, and Ranzino are analogous art because they are from a similar field of endeavor in speech recognition systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Gong with the RF ID tag taught by Ranzino in order to provide a means for easily identifying a particular user to communicate information related to that user's preferences *(Ranzino, Col. 1, Lines 56-61; and Col. 4, Lines 31-42)*.

9. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al in view of Gong and yet further in view of Byers *(U.S. Patent: 6,219,645)*.

With respect to **Claim 16**, Komori in view of Gong teaches the speech recognition model adaptation system utilizing microphone, speaker, and environmental noise data, as applied to Claim 13. Komori in view of Gong does not specifically suggest a plurality of microphones that are initiated as an end user walks in between the microphones, however Byers teaches such a plurality of microphones *(Col. 3, Lines 11-35; Col. 4, Line 66- Col. 5, Line 12; and Col. 12, Lines 30-56)*.

Komori, Gong, and Byers are analogous art because they are from a similar field of endeavor in speech recognition. Thus, it would have been obvious to a person of ordinary skill

in the art, at the time of invention, to modify the teachings of Komori in view of Gong with the multiple microphone speech recognition system taught by Byers in order to allow a user to control multiple ASR devices while providing mobility through a room or environment *(Byers, Col. 1, Line 65- Col. 2, Line 7)*.

10. **Claim 24** is rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al in view of Gong and yet further in view of Sönmez et al *(U.S. Patent: 5,745,872)*.

With respect to **Claim 24**, Komori in view of Gong teaches the speech recognition model adaptation system utilizing microphone, speaker, and environmental noise data, as applied to Claim 13. Although Komori recites receiving adaptation data from a wireless telephone *(wireless telephone, Col. 1, Lines 17-24; Col. 2, Lines 15-24; and multiple data types, Col. 5, Lines 3-35)*, Komori does not specifically suggest that the wireless telephone is a cellular telephone, however Sönmez teaches speech recognition model adaptation using a cellular phone *(Col. 2, Lines 1-7)*.

Komori, Gong, and Sönmez are analogous art because they are from a similar field of endeavor in speech recognition model adaptation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Komori in view of Gong with the use of speech recognition model adaptation for a cellular phone as taught by Sönmez in order to adapt speech data to changing cellular phone environments *(Sönmez, Col. 2, Lines 1-7 and 29-36)*.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Rahim *(U.S. Patent: 5,960,397)*- teaches speech recognition model adaptation based on acoustic environment data.

Netsch *(U.S. Patent: 6,003,002)*- teaches speech recognition model environment adaptation performed at a network server.

Balakrishnan et al *(U.S. Patent: 6,182,038)*- teaches speech recognition models that continually adapt to a speaker's environment and use of language.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached at (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
8/15/2006

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